UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765.777	01/27/2004	Craig William Fellenstein	AUS920030962US1	2482

45327   7590   03/07/2007
IBM CORPORATION (CS)
C/O CARR LLP
670 FOUNDERS SQUARE
900 JACKSON STREET
DALLAS, TX 75202

EXAMINER
AHLUWALIA, NAVNEET K

ART UNIT	PAPER NUMBER
2166	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/765,777	FELLENSTEIN ET AL.
	Examiner	**Art Unit**	
	Navneet K. Ahluwalia	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 December 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10,11 and 13* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10,11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to the Amendment filed December 6, 2006.

Response to Arguments

2.   Claims 1 – 8, 10, 11 and 13 are pending in this Office Action, claims 9 and 12

have been cancelled. After a further search and a thorough examination of the present

application, claims 1 – 8, 10, 11 and 13 remain rejected.

3.   Applicant's arguments filed with respect to claims 1 – 8, 10, 11 and 13 have been

fully considered but they are not persuasive.

First, Applicant argues that there is no teaching in Jochemsen of individual

clusters being moved or rearranged to for more contiguous units.

In response to Applicant's argument, the Examiner submits primarily moving or

rearranging of individual clusters for more contiguous units is not in the claim.

Furthermore Jochemsen discloses in column 4 lines 41 – 55 the fragmentation and the

coalescing of and normalizing the clusters and files selected.

Second, Applicant argues that there is no teaching in Jochemsen of the agent

*being configured to operate while the system is **at least** idle.*

In response to Applicant's argument, the Examiner submits that Jochemsen

discloses in column 2 lines 1 – 10 and 58 – 67 and column 3 lines 23 – 45 the operation

of the agent in the computer system irrespective of it being idle or non-idle. The

*argument is respectfully traversed as it requires the agent to operate **at least** when the*

system is idle which is clearly disclosed in Jochemsen.

Other claims recite the same subject matter and for the same reasons as cited

above the rejection is maintained.

Hence, Applicant's arguments do not distinguish the claimed invention over the prior art

of record. In light of the foregoing arguments, the 102 rejections are sustained.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent; published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1 – 8, 10, 11 and 13 are rejected under 35 U.S.C. 102(e) as being

anticipated by Jochemsen et al. ('Jochemsen' herein after) (US 6,757,804 B2).

With respect to claim 1,

Jochemsen discloses an apparatus for file defragmentation of at least one

storage medium, comprising:

- a computer system at least coupled to the at least one storage medium (column 1 lines 11 - 25, Jochemsen);

- a tracker, wherein the tracker is at least configured to maintain a record of at least locations of a plurality of file fragments on at least one storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen); and

- an agent, wherein the agent is at least: configured to operate while the computer system is at least idle (column 2 lines 58 – 67, Jochemsen); configured to defragment the plurality of file fragments (column 2 lines 1 – 10, Jochemsen); and configured to delete the record of at least locations of the plurality of file fragments (column 2 lines 58 – 67 and column 3 lines 23 – 45, Jochemsen).

With respect to claim 2,

Jochemsen discloses the apparatus of claim 1, wherein the agent further comprises at least having the ability to modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen).

With respect to claim 3,

Jochemsen discloses the apparatus of claim 2, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226

and 42 – 47, Jochemsen).

With respect to claim 4,

Jochemsen discloses the apparatus of claim 1 further comprising:

- a memory, wherein the memory is at least configured to store locations of a

  plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58,

  Jochemsen);

- a system monitor, wherein the system monitor at least determines if file

  fragmentation occurs when data is written to, deleted from, or scanned from

  the at least one storage medium (column 2 lines 58 – 67, Jochemsen); and

- an accounting means, wherein the accounting means is at least configured to

  store locations of a plurality of file fragments when the system monitor has at

  least determined that file fragmentation has occurred (column 3 lines 23 – 45,

  Jochemsen).

With respect to claim 5,

Jochemsen discloses an apparatus for file defragmentation of at least one

storage medium at least coupled to a computer system, comprising:

- a memory, wherein the memory is at least configured to store locations of a

  plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58,

  Jochemsen);

- an idle monitor, wherein the idle monitor is at least configured to enable

  defragmentation while the computer system is at least idle (column 2 lines 58

  – 67, Jochemsen);

- a defragmenter, wherein the defragmenter is at least configured to

  defragment the plurality of file fragments (column 1 lines 49 – 53,

  Jochemsen); and

- an update monitor, wherein the update monitor is at least configured to delete

  a record in the memory of at least locations of the plurality of file fragments

  that at least been defragmented (column 3 lines 23 – 45, Jochemsen).

With respect to claim 6,

Jochemsen discloses the apparatus of claim 5, wherein the agent further

comprises at least having the ability to modify attributes of defragmentation (column 3

lines 37 – 46, Jochemsen).

With respect to claim 7,

Jochemsen discloses the apparatus of claim 6, wherein the attributes are

selected from the group consisting of file type, frequency of access, typical access

duration, interval between accesses, file/application association, file size, read

attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226

and 42 – 47, Jochemsen).

With respect to claim 8,

Jochemsen discloses a method of for file defragmentation of at least one storage medium coupled to a computer system, comprising:

- determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 1 lines 49 – 58, Jochemsen); if the computer system is idle, defragmenting a file (column 2 lines 58 – 67, Jochemsen);

- determining if defragmentation is complete if defragmentation is complete, deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 10,

Jochemsen discloses a method of defragmenting at least one storage medium coupled to a computer system, comprising:

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, defragmenting the file (column 2 lines 58 – 67, Jochemsen);

- determining if defragmentation is complete if defragmentation is complete, deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 11,

Jochemsen discloses a computer program product for file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file

fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen); computer code for determining if defragmentation is complete; if defragmentation is complete, computer code for deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, computer code for determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, computer code for reporting an error (column 3 lines 23 – 45, Jochemsen).

With respect to claim 13,

Jochemsen discloses a computer program product for defragmenting at least one storage medium coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 1 lines

49 – 58, Jochemsen); if the computer system is idle, computer code for

defragmenting a file (column 2 lines 58 – 67, Jochemsen);

- computer code for determining if defragmentation is complete, if

defragmentation is complete, computer code for deleting a location of the

fragmented file clusters in a storage medium (column 1 lines 49 – 53,

Jochemsen); if defragmentation is not complete, computer code for

determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if

defragmentation is stopped by activity, computer code for sleeping for an

interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not

stopped by activity, computer code for reporting an error (column 3 lines 23 –

45, Jochemsen).

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Navneet

Navneet K. Ahluwalia
Examiner
Art Unit 2166

Dated: 02/21/2007

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER